



**A DEMOGRAPHIC  
AND ECONOMIC  
COMPARISON OF  
SELECTED  
COUNTIES IN  
MISSOURI.**

**April 2002**



**RESEARCH, DEVELOPMENT AND TECHNOLOGY**



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**A DEMOGRAPHIC AND ECONOMIC COMPARISON OF  
SELECTED TWO-LANE  
AND FOUR-LANE COUNTIES IN MISSOURI.**

MoDOT

Research, Development and Technology Transfer

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## **Introduction**

This report compares selected demographic and economic variables for fourteen counties in Missouri. The variables and counties included in this analysis were selected at the request of Duane S. Michie, Commissioner, Missouri Highways and Transportation Commission. This report is intended to illustrate the economic and demographic characteristics prevalent in the selected counties over a 10-year period of 1990 to 2000.

The following variables were included in this report:

- 1) Population Growth for each county, 1990 and 2000<sup>i</sup>
- 2) Per Capita Income for each county, 1990 and 2000<sup>ii</sup>
- 3) Unemployment Rate for each county, 1992 and 2000<sup>iii</sup>
- 4) County Sales Tax collections, 1990 and 2000<sup>iv</sup>
- 5) Number of New Businesses and Industries, 1993 and 1999<sup>v</sup>
- 6) Real Estate Assessed Valuations, 1990 and 2000<sup>vi</sup>

The counties included in the analysis were selected by Commissioner Michie and categorized as those counties that include interstates and four-lane facilities, and those counties that have two-lane corridors. These are referred to as four-lane and two-lane counties.

The counties included in this report are:

### Four-Lane Counties

- 1) Cape Girardeau County
- 2) St. Francis County
- 3) Howell County
- 4) Laclede County
- 5) Phelps County
- 6) Lincoln County
- 7) Harrison County

### Two-Lane Counties

- 1) Nodaway County
- 2) Shannon County
- 3) Carter County
- 4) Shelby County
- 5) Linn County
- 6) Lewis County
- 7) Clark County

The number of statewide traffic fatalities on two-lane and four-lane corridors was also requested for this analysis. This information is provided for two-lane facilities and four-

lane facilities for the years 1998 through 2000. The four-lane facilities are broken down by expressway and freeway designation.

For comparison, the following variables are included:

- 1) Daily Vehicle Miles of Travel per year, and three-year average
- 2) Number of Fatal Accidents per year, and three-year average
- 3) Fatal Accident Rates per year, and three-year average

Also included are the traffic safety operational performance measures for March 2002. This data includes the number and rate of vehicle crashes by severity, and the rate of vehicle crashes by roadway type.

#### Summary of Demographic, Economic and Fatal Accident Variables

In all cases, the counties classified as four-lane counties demonstrated greater population and economic growth than those counties identified as two-lane counties. Four-lane counties as a whole had over seven times the population growth in the 10-year period analyzed. Differences between the counties in per capita income growth and decreased unemployment are less dramatic. Per capita income grew 52.3% (four-lane) versus 50.6% (two-lane) and unemployment decreases were at a rate of 2.8% for four-lane counties and 1.5% for two-lane counties. Sales tax revenue in the four-lane counties increased over 200% while two-lane counties experienced an increase of 148%. There was an 11% increase in businesses and industries in the four-lane counties and only a 1.5% increase in two-lane counties. Finally, four-lane counties accrued a 75% increase in real estate valuations while two-lane counties increased at a rate of 43%.

For these groupings of counties, there is a clear difference in economic and population growth rates for counties characterized as four-lane versus two-lane counties. Less clear are the causal factors related to these differences in growth rates.

In terms of fatal accidents, four-lane roadways have fewer fatalities while servicing higher volumes of traffic. The limited and controlled access typical on four-lane roads reduces conflict points when compared to typical two-lane roads in Missouri.

**Summary of Demographic and Economic Changes: Two-Lane and Four-Lane Counties**

	<b>Four-Lane Counties</b>	<b>Two-Lane Counties</b>
Mean Percent Population Change 1990-2000	+16.5%	+2.3%
Mean Percent Change Per Capita Income 1990-2000	+52.3%	+50.6%
Mean Decrease in Unemployment Rate	-2.8	-1.5
Mean Change in Sales Tax Revenue	+209%	+148%
Mean Percent Increase in Industries	+11%	+1.5%
Mean Percent Increase in Real Estate Valuations	+75%	+43%

## Selected Demographic and Economic Characteristics by County Designation

<b>Four-Lane Counties</b>							
	Cape Girardeau	St. Francis	Howell	Laclede	Phelps	Lincoln	Harrison
Population growth, 1990	61,663	48,904	31,447	27,158	35,248	28,892	8,469
2000	68,693	55,641	37,238	32,513	39,825	38,944	8,850
% change	+11.5%	+13.8%	+18.4%	+19.7	+13%	+34.8	+4.5
Per Capita Income							
1990	\$15,941	\$12,261	\$11,670	\$12,678	\$13,854	\$14,491	\$13,236
1999	\$24,886	\$18,215	\$18,420	\$19,473	\$21,041	\$21,685	\$19,502
% change	+56%	+49%	+58%	+54%	+52%	+50%	+47%
Unemployment Rate							
1992	5.2	9.7	6.5	8.6	5.5	7.1	3.9
2000	3.0	6.6	3.9	4.1	2.8	3.4	2.9
change	-2.2	-3.1	-2.6	-4.5	-2.7	-3.7	-1.0
Sales Tax Revenue(x 000)							
1990	8,518	3,867	2,410	2,928	3,432	3,209	544
2000	22,859	12,889	7,066	8,692	12,231	9,039	1,827
% change	+168%	+233%	+193%	+197%	+256%	+182%	+235%
Number New Industries							
1993	2,161	1,085	879	784	990	605	251
1999	2,321	1,285	1,024	814	1,079	739	250
% change	+7.4%	+18.4%	+16.4%	+3.8%	+8.9%	+22%	-0.3%
Real Estate Valuations							
1990	312,101,676	129,476,400	89,951,780	95,353,303	124,005,450	114,609,023	37,694,730
2000	551,244,903	247,175,915	169,856,190	181,731,480	191,320,729	224,889,604	48,905,700
% change	+76%	+91%	+89%	+91%	+54%	+96%	+29%

## Selected Demographic and Economic Characteristics by County Designations

<b>Two-Lane Counties</b>							
	Nodaway	Shannon	Carter	Shelby	Linn	Lewis	Clark
Population growth, 1990	21,709	7,613	5,515	6,942	13,885	10,33	7,547
2000	21,912	8,324	5,941	6,799	13,754	10,494	7,416
% change	+0.9%	+9.3%	+7.7%	-2.1%	-0.9%	+2.6	-1.7
Per Capita Income							
1990	\$13,342	\$9,605	\$10,864	\$14,546	\$13,994	\$12,276	\$11,018
1999	\$19,958	\$14,898	\$15,652	\$19,397	\$20,038	\$16,965	\$16,306
% change	+50%	+55%	+44%	+33%	+43%	+38%	+48%
Unemployment Rate							
1992	2.1	8.5	9.3	4.7	8.5	5.6	5.5
2000	1.3	5.3	5.4	6.3	7.4	2.9	4.8
change	-0.8	-3.2	-3.9	+1.6	-1.1	-2.7	-0.7
Sales Tax Revenue(x 000)							
1990	1,292	199	251	457	1,223	446	359
2000	3,991	443	543	1,063	2,407	1,132	958
% change	+211%	+123%	+116%	+133%	+97%	+154%	+167%
Number New Industries							
1993	487	138	140	194	367	237	148
1999	533	147	140	194	340	238	151
% change	+9.4%	+6.5%	0.0%	0.0%	-7.3%	+0.4	+2.0%
Real Estate Valuations							
1990	88,855,150	21,667,670	14,986,298	31,086,170	38,297,260	34,795,105	27,412,090
2000	136,419,240	31,109,750	22,444,212	43,146,724	55,479,930	42,968,271	40,007,150
% change	+54%	+42%	+50%	+39%	+45%	+23%	+46%

## Traffic Fatality Rates for Two-Lane and Four-Lane Facilities

<b><u>Two-Lane</u></b>				<b><u>Four –Lane</u></b>					
				<b>Expressway(1)</b>			<b>Freeway(2)</b>		
	Vehicle Miles Traveled	Fatalities	Fatality Rate(3)	Vehicle Miles Traveled	Fatalities	Fatality Rate	Vehicle Miles Traveled	Fatalities	Fatality Rate
1998	44.3 million	429	2.62	16.2 million	94	1.40	54.2 million	210	1.05
1999	44.6 million	433	2.43	16.7 million	91	1.42	54.7 million	174	0.88
2000	45.0 million	429	2.55	17.2 million	70	1.13	55.2 million	179	0.94

### **Three Year Summary of Fatality Data**

	Mean Vehicle Miles	Mean Fatalities	Mean Fatality Rate
Two-Lane	44.6 million	430.3	2.53
Expressway	16.7 million	85.0	1.32
Freeway	54.7 million	177.7	0.94

(1) Expressway defined as a travelway with limited/partial control of access and two or more lanes for through traffic in each direction. Intersections are normally at-grade, although isolated interchanges are possible.

(2) Freeway defined as divided travelway with full control of access and two or more lanes for through traffic in each direction. All intersections are grade separated (interchanges).

(3) Fatal accident rate represents the number of fatal accidents per hundred million vehicle miles traveled.

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i [http://mcdc2.missouri.edu/cgi-bin/broker?\\_PROGRAM=websas.dp1\\_2k.sas&\\_SERVICE=sasapp&st=29&co=031](http://mcdc2.missouri.edu/cgi-bin/broker?_PROGRAM=websas.dp1_2k.sas&_SERVICE=sasapp&st=29&co=031)

ii [http://oseda.missouri.edu/MOSTATS/Missouri/Counties/beainc.Cape\\_Girardeau\\_MO.html](http://oseda.missouri.edu/MOSTATS/Missouri/Counties/beainc.Cape_Girardeau_MO.html),

iii [http://mo.works.state.mo.us/lmi/owa/adb.area2?x\\_area=04000031](http://mo.works.state.mo.us/lmi/owa/adb.area2?x_area=04000031)

iv <http://econ.missouri.edu/eparc/rcip/busecc/mo-map.asp>

v <http://www.census.gov/epcd/cbp/map/99data/29/031.txt>

vi <http://econ.missouri.edu/eparc/dbase.html>